

Proceedings of the Iowa Academy of Science

Volume 81 | Number

Article 5

1974

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Meredith Blackwell

University of Iowa

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Recommended Citation

Blackwell, Meredith (1974) "A New Species of Licea (Myxomycetes)," *Proceedings of the Iowa Academy of Science*: Vol. 81: No. 1 , Article 5.

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A New Species of *Licea* (Myxomycetes)MEREDITH BLACKWELL¹

BLACKWELL, M. (Division of Biological Sciences, University of Florida, Gainesville, Florida 32611). A new species of *Licea* (Myxomycetes). *Proc. Iowa Acad. Sci.* 81(1): 6, 1974.
A new protoplasmodial species of the genus *Licea* is reported from dung of herbivorous animals. It is differentiated from all

other species in the genus except one by a smooth shiny black peridium; from *L. fimicola* Dearness and Bisby it differs by sporangial shape and spore characters.

INDEX DESCRIPTORS: *Licea*, Myxomycete Taxonomy.

A member of the genus *Licea* was isolated from dung placed in a moist chamber. Because of its distinct combination of sporangial and spore characters it is described here as a new species.

Licea alexopouli Blackwell, sp. nov.

Sporangia dissipatia, sessilia, hemispherica vel subglobosa, 0.08-0.13 mm in diam., nitentia nigra, lenia, interdum rugosa postquam exsiccata; peridium crassum, cartilaginolum; dehiscens per preformatum operculum vel irregulare; sporae globosae ad ovales, flavae in massa, crassitunicata, laeves; 9.5-11 μ in diam. Protoplasmodium hyalinum.

Sporangia scattered, sessile, hemispherical to subglobose, 0.08-0.13 mm in diameter, shiny, black, smooth, sometimes becoming wrinkled and impregnated with refuse material on drying; sporangial wall thick, cartilaginous; dehiscence by a preformed lid or irregular; spores globose to oval, bright yellow in mass, pale yellow by transmitted light, their walls thick, smooth; 9.5-11 μ in diameter. Protoplasmodium colorless.

Collections Examined: UTM 615 (type), UTM 1265, DTK 12631, DTK 12632, DTK 12641, DTK 12951, and DTK 12954.

Type Locality: Austin, Travis Co., Texas, from horse dung collected 15 December 1964.

Habitat: Horse and bison dung in moist chamber, cow dung.

Distribution: Texas, Oklahoma, California.

A portion of the type collection has been deposited in the University of Texas Myxomycete Collection (UTMC), Austin, Texas; the remainder has been retained in the personal collection of the author.

This species is named in honor of Dr. C. J. Alexopoulos, who continually and carefully contributes to our better understanding of the taxonomy and systematics of the Myxomycetes.

Licea alexopouli is distinguished from all other species of *Licea* except one by its smooth, shiny, black peridium; from *L. fimicola* Dearness and Bisby it is distinguished by its hemispherical to subglobose sporangial shape (Figure 1) and smooth, paler, smaller spores (Figure 2). *L. tuberculata* Martin also has a shiny black peridium, but it is strongly tuberculate.

The sporangia of the genus *Licea* are easily differentiated from other myxomycetes by their lack of capillitium or pseu-



Figure 1. Habit photograph of *Licea alexopouli*. Scale indicates 0.1 mm.

Figure 2. Spores and peridium of *L. alexopouli*. Scale indicates 10 μ m.

docapillitium. It is often more difficult to separate them from the fruit bodies of other fungi. This is evidenced by the fact that at least eight Ascomycetes have been described as species of *Licea* by competent myxomycete taxonomists (Martin and Alexopoulos, 1969 [p. 53]). For such reasons Alexopoulos (1960, 1969) has emphasized the taxonomic importance of studying the entire life cycle of myxomycetes.

Since the sporangia of *L. alexopouli* resemble the sporangia of certain species of *Pilobolus*, an attempt was made to grow the organism in agar culture. But even spore germination, which would have been diagnostic, failed. However, more horse dung from the type locality and another locality was incubated in moist chamber, and almost colorless protoplasmodia were seen to develop into the shiny black sporangia. These observations were verified by Dr. Janet Winstead (Madison College, Harrisonburg, Virginia), who found this species in moist chamber cultures of bison dung from Oklahoma.

I should like to thank Dr. D. T. Kowalski (California State College, Chico, California) for the loan of his specimens of this species. Ms. Patricia Baxter kindly prepared the Latin diagnosis.

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¹ Division of Biological Sciences, University of Florida, Gainesville, Florida 32611.